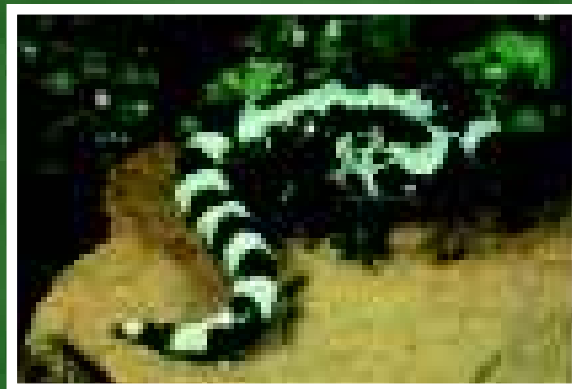

Land & Air & Water

Volume 13 Number 1
Winter 2002



Kentucky Natural Resources and Environmental Protection Cabinet

Land Air & Water

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“Save Something Wild” on your taxes

By Cecilia Bunch
Kentucky State Nature Preserves Commission



Because less than one percent of Kentucky's land and water remains undeveloped or unmodified, the Nature and Wildlife Fund was established in 1980 to help preserve those areas of unusual natural significance. As part of the Nongame Species and Habitat Acquisition Program, the fund provides Kentuckians a convenient way to donate via the voluntary checkoff designation on their state income tax forms.

By donating to the Nature and Wildlife Fund, Kentuckians have the privilege of participating in the protection of our natural heritage. Tax-deductible donations are shared equally by the Kentucky State Nature Preserves Commission and the Kentucky Department of Fish and Wildlife Resources. The funds are used to protect the state's rare plants and animals, acquire and protect the most important and threatened forests, wetlands and prairies, and manage our diverse wildlife heritage.

Donating is easy. Simply checkoff the amount you wish to contribute at the end of your Kentucky state income tax form. Be sure to notify your tax preparer of the amount you wish to donate. If you prefer, send a check directly to the Nature and Wildlife Fund, c/o Kentucky State Nature Preserves Commission, 801 Schenkel Lane, Frankfort, KY 40601-4303 or call (502) 573-2886 for more information.

ATTENTION -- KENTUCKY TEACHERS

Spring is right around the corner, and it's time to begin thinking about spring cleaning—our state, that is.

Commonwealth Cleanup Week is held annually each March. To get schools excited about participating in the event, a statewide poster contest will take place during the months of January and February. All Kentucky students in grades 1-8 are eligible to participate in the contest to bring attention to cleaning up our state.

All poster entries must be received by Feb. 15. Poster winners can receive savings bonds up to \$100 and t-shirts. To find out more about Commonwealth Cleanup Week and the poster contest, visit www.ky.environment.org or contact Kerry Holt at (502) 564-5525.

Land Air & Water Online

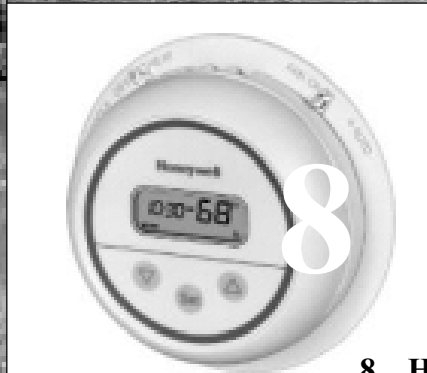
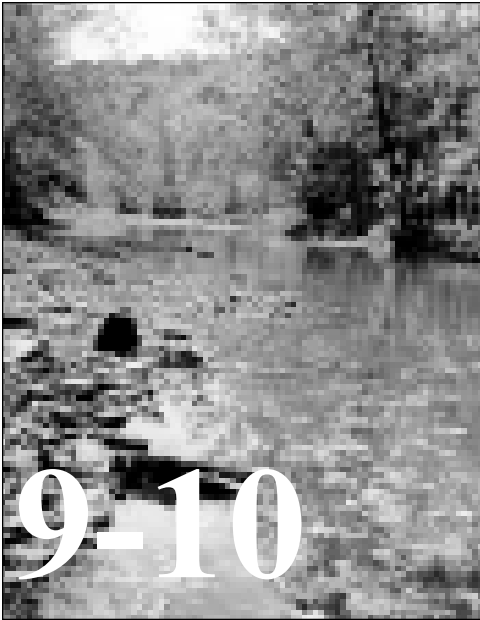
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On the Cover

MAIN PHOTO: The Mississippi map turtle (*Graptemys kohnii*) can be found in large rivers and lakes in western Kentucky.

INSETS: The Marbled salamander (*Ambystoma opacum*) is found statewide in forested areas, breeding in woodland ponds in late fall. The Barking treefrog (*Hyla gratiosa*) is found only in a narrow band within the western Pennyroyal, breeding after heavy summer rains. Photographs by John MacGregor.

A proud moment



Washington County thrilled to be first “Certified Clean County”

By Kerry Holt
Office of the Secretary

“We’re number one!” It was hard for George Ann Palmer, Washington County’s solid waste coordinator, to hold back her excitement. Her county had just been named Kentucky’s first Certified Clean County, and it was easy to see Palmer was proud of the first place showing. Palmer readily admits that when it came to finishing first she got a little competitive. Upon hearing that Grant County might complete the program before Washington County, Palmer was inspired to kick things into high gear. “My first thought was there’s no way another county is going to finish before we do,” she said.

Palmer, along with other local

officials, were present for the Oct. 31 roadside ceremony where Gov. Paul Patton, Natural Resources and Environmental Protection Cabinet Secretary James Bickford, Washington County Judge-Executive John Settles and Sen. Dan Kelly unveiled a sign that touted the county’s

“Because our community cares enough to clean up its dumps, it paints a good picture for visitors. It shows that we care and we want you to live here.”

Judge-Executive Settles

newest honor. Gov. Patton commended Secretary Bickford and the Washington County field staff for their hard work and dedication in keeping the Commonwealth’s natural resources a top priority. Patton referred to the old adage that businesses thrive on “location, location, location.” However, he added that today the location must also be a clean one.

Judge-Executive Settles has already seen the positive impact of being a clean county. “The excitement just continues to grow,” he said. “We’ve had other counties call to learn how they can participate and how the program works.” Another added benefit of being a clean county is the pride it instills in residents. “Because our

community cares enough to clean up its dumps, it paints a good picture for visitors. It shows that we care and we want you to live here,” Settles explained.

As part of the Certified Clean County program, counties must have mandatory garbage collection in place. In return, the state will pay for 75 percent of illegal dump cleanup costs. Washington County received a \$60,000 state grant to clean up its 27 illegal dumps. There are 12 other counties participating in the program: Bell, Hardin, Harlan, Grant, Kenton, Knott, Letcher, Magoffin, Meade, Menifee, Pike and Warren. Earlier this year, the governor signed an executive order creating the program after the 2001 General Assembly failed to pass mandatory garbage pickup. ✕

TOP LEFT: Gov. Patton with state and county officials unveil the clean county sign that stands at the entrance of Washington County.

ABOVE: Gov. Patton and Secretary James Bickford (right) congratulate Judge-Executive Settles (center) for his county’s Certified Clean County designation.

LEFT: Gov. Patton discussed the importance of the Certified Clean County program during the ceremony and encouraged other counties to follow the example set by Washington County. Photos provided by Matt Hackathorn and Creative Services





Local growth brings new regional sewer system

By Mark York
Office of the Secretary

While cars and trucks have been spinning around the track at high speeds at the new Kentucky Speedway near Sparta, the wheels to treat wastewater for area residents and businesses were also turning, but not quite as fast.

Ground was broken in September for a new regional sewer system to serve Gallatin, Carroll and Owen counties. The system connects the cities of Glencoe, Sparta and Sanders along with the speedway through the city of Worthville and transports wastewater to Carrollton. Carrollton's system then treats the wastewater.

It took nearly three years for the project, which has 18 miles of force main and three pump stations, to get to the starting line. The effort to create a regional system began after the Kentucky Division of Water received plans from three of the cities to construct their own collection systems and two wastewater treatment plants. While the division was reviewing these plans, the Kentucky Speedway began construction and its owners also proposed a wastewater collection system and treatment plant.

With so many proposals to serve a limited area, it became obvious to the division that a regional system would be

the best, and most economic, solution.

As far back as 1971, Congress realized that small treatment facilities are not as reliable as larger, better-maintained systems. A report to a Senate subcommittee said, in part, "studies...indicate that there is a high correlation between the size of a treatment plant and the percentage of time during which the plant fails to perform according to design standards. In short, the larger the treatment plant, the more reliable is its performance."

The Gallatin-Carroll-Owen regional system is the latest in a series of efforts across the Commonwealth to create more efficient, reliable and economic treatment systems. Construction is nearing completion on a \$26 million project that will take 18 package treatment plants out of operation in Daviess County. The Kentucky Infrastructure Authority (KIA) approved funding for the project in December 1999.

Wastewater is not the only target of regionalization efforts. Water supply needs are also being met by smaller systems cooperatively combining their efforts into one viable system.

Nowhere is that more evident than in southwestern Kentucky with the Logan-Todd Regional Water Commission. The commission is implementing a 30-year master plan for water source, treatment, storage and distribution for the two-county area.

(Left to right) Sen. Ernie Harris, Rep. Paul H. Marcotte, Owen Co. Judge-Executive William O'Banion, Carroll Co. Judge-Executive Gene McMurry; Gallatin Co. Judge-Executive George Zubaty; Sec. James Bickford, Glencoe Mayor Michael Murphy, Carrollton Mayor Ann Deatherage, Sanders Mayor Jackie Ogden and Sparta City Clerk Jayne Smith shovel soil during the groundbreaking ceremony in Glencoe.

Photo by Richard Thomas

This project, nearing \$50 million, will close eight water treatment facilities. In their place will be one, state-of-the-art water treatment plant at Guthrie, a two-million gallon and two one-million gallon storage tanks, and miles of water lines to serve customers to 12 entities.

While the cost of these new systems may seem high, proponents are quick to point out that new federal water standards will force many existing systems to undergo costly upgrades or force them out of business completely.

The move to regional water systems is already having a positive impact. In its 2000-2001 *State of Kentucky's Environment Report*, the Environmental Quality Commission noted better compliance of drinking water standards. "The number of Kentuckians served by systems that were persistent violators of safe drinking water standards dropped from 38,000 in 1997 to 8,000 in 1999—a result of merging small, nonviable systems with larger systems."

The creation of regional systems is not always easy. "Communities that are competing for new jobs and growth can find it hard to cooperate when it comes to providing safe drinking water or treating wastewater," said James E. Bickford, secretary of the Natural Resources and Environmental Protection Cabinet. "As a member of the KIA, I believe we must use our limited financial resources in the most economical fashion, and regional systems are the way to go."

The \$6.1 million system for Gallatin, Carroll and Owen counties is funded from several federal and state agencies, and the speedway is also contributing financial support. The speedway has also committed to becoming a customer of the regional system once the collection infrastructure is in place. The entire system should be completed by spring 2002.





LEFT: *Natural Resources and Environmental Protection Cabinet Secretary James Bickford (third from left) presents the Environmental Excellence Award for Industrial Environmental Leadership to Owensboro Municipal Utilities during the Governor's Conference on the Environment last year.* Photo by Creative Services

BELOW: *Secretary Bickford, along with state contractors and Department for Environmental Protection and OMU staff, cut the ribbon to signify the beginning of the state's partnership with OMU.* Division of Waste Management photo



A new partnership between Owensboro Municipal Utilities and the Natural Resources and Environmental Protection Cabinet is helping Kentucky better manage a major solid waste concern.

From waste to fuel

Articles by Matt Hackathorn
Division of Waste Management

When the rubber meets the road and goes flat or wears out, then what? The disposal of waste tires in Kentucky has been a nagging concern for years, but a solution to this solid waste issue has started to fuel interest and even electrify the western part of the state.

Since 1997 the Natural Resources and Environmental Protection Cabinet has focused on improving the management of waste tires in Kentucky. Last October, the Division of Waste Management (DWM) celebrated its first tire-elimination partnership with Kentucky industry. Owensboro Municipal Utilities (OMU) is effectively ridding the state of many waste tires by burning them as fuel to create electricity. This new government/industry partnership benefits Kentuckians by eliminating large, illegal tire piles, which are considered serious fire hazards and ideal breeding grounds for mosquitoes and other vermin.

In 1998 the cabinet encouraged the Kentucky General Assembly to establish the Waste Tire Trust Fund that requires tire retailers to pay \$1 to the state for every replacement tire sold. As a result, the DWM was able to fund a highly successful Tire Amnesty Program aimed at providing citizens in every county with a one-time opportunity to dispose of unwanted tires at no cost. To date, the Tire Amnesty

Program has collected more than nine million waste tires for beneficial reuse in projects like the one at OMU.

Scrap tires have gained popularity in recent years as many industries nationwide look to create recycling markets. Some useful applications include as a fuel in utility boilers, known as tire-derived fuel (TDF), as a cushion in the bottom of landfills to keep sharp objects from puncturing liners and as an effective replacement for gravel in agricultural projects. The TDF process at OMU involves mixing a small percentage of chipped tires into the coal mix used to fuel the utility's Unit 1 Cyclone boiler system. Tires actually generate a slightly higher BTU rating than coal, while producing less ash and lower sulfur emissions.

"The story here is not that we've developed new technology in the TDF industry, because the process we're using has been around for a while," said George Gilbert, Kentucky Department for Environmental Protection environmental engineering consultant, who helped develop the permit regulations on the OMU project. "The real story for Kentucky is that at least one-half to two-thirds of the state will no longer have to transport used tires out of state to take advantage of an environmentally sound practice for eliminating them."

Gilbert said Kentucky generates more than four million waste tires each year. A large percentage of those tires are beneficially reused in civil engineering applications like new landfill liners or as TDF in other states like Illinois and Indiana. However, a significant percentage, perhaps 10 percent or more, still ends up in illegal tire piles, open dumps and landfills.

Continued on next page

Kentucky is currently using or considering the use of several different applications for used tires that include:

- Tire-derived fuel for utility and industrial boilers.
- Liners in new landfill applications.
- Bedding in both playgrounds and horse arenas.
- Replacement for gravel in septic tanks.
- Additives for roads (known as rubberized asphalt).
- Top dressing for athletic fields to ease the stress on grass.
- Replacement to asphalt on athletic running tracks.
- Structural application (using whole tires filled with either dirt or concrete).

The Waste Tire Trust Fund generated approximately \$3.4 million last fiscal year for use in cleaning up large, troublesome illegal tire dumps. Recently, three significant tire dumps were eliminated. These sites included approximately 450,000 waste tires near Beaver Dam in Ohio County, 500,000 tires in northern Gallatin County and 300,000 tires in Logan County near Russellville.

According to Natural Resources and Environmental Protection Cabinet Secretary James E. Bickford, creating scrap tire markets will help eliminate future tire piles. "We've had some success establishing an infrastructure to effectively manage tire accumulation in Kentucky," he said. "Now we must concentrate on developing more scrap tire markets right here in Kentucky to more efficiently process the tires we collect. Our partnership with OMU is an important first step in that direction."

Jim Roberts, the fuel and byproduct superintendent at OMU, worked with state government officials to develop Kentucky's first TDF plan. Roberts said the project offered the utility an attractive opportunity. "The price of scrap tires per ton is actually a little less than the price of coal," said Roberts. "We plan to burn a tire mix of two percent in our boiler with 98 percent coal. In the first year that equates to about 28 tons per day, which will divert approximately one million tires from landfills."

Gilbert said the arrangement offers advantages to the state as well. "For the last several years, Kentucky has transported its waste tires to Archer Daniels Midland Company (ADM) in Decatur, Ill., for use in their industrial boiler," he said. "Kentucky haulers paid ADM a \$25-per-ton tipping fee, as well as the chipping expense, transportation and labor. There's no question that this partnership with OMU offers Kentuckians a substantial savings."

Roberts said OMU has contracted with Kentucky scrap tire handlers to chip the waste tires and haul them to the utility. "This partnership is a fine example of government and industry working together for a better environment," he explained. "We're doing it because it's the right thing to do."

Kentucky's attack on tires

Four years ago Kentucky was smothering under a mountain of unregulated waste tires. Irresponsible accumulators were collecting massive amounts without plans (or intentions) of disposing of them properly; citizens were allowing them to pile up, or worse, disposing of them in illegal dumps; and the state had few markets established for the beneficial reuse of waste tires.

The Natural Resources and Environmental Protection Cabinet sent a message to the 1998 Kentucky General Assembly that sounded something like this, "If you establish a fund that collects \$1 for every waste tire generated in Kentucky, then we can start solving the waste tire problem."

While proposing an additional fee on Kentuckians is never a popular alternative for legislators, the result of that particular session laid the groundwork for one of the cabinet's most successful programs.

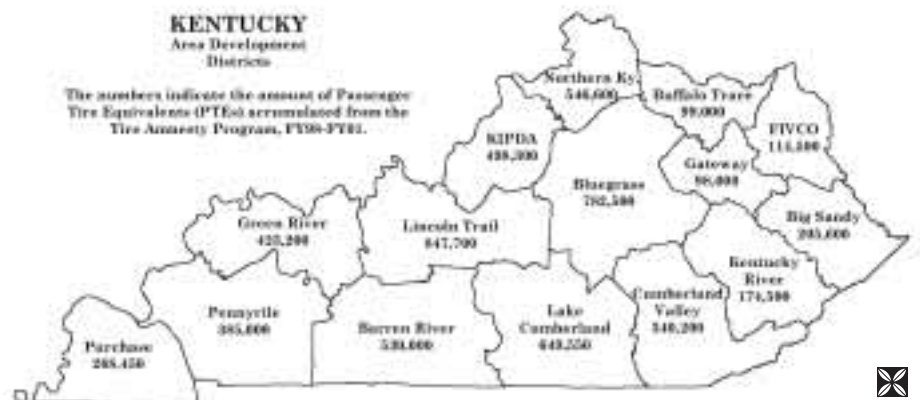
The Tire Amnesty Program began in the fall of 1999 and wrapped up last fall, accounting for the collection and proper disposal of more than five million waste tires in just three years. Funding for the program came from the Waste Tire Trust Fund, an endowment established by the Kentucky General Assembly requiring retailers to charge consumers a \$1 fee on every motor vehicle replacement tire sold.

With help from Kentucky's area development districts and state contractors, Division of Waste Management (DWM) staff led the Tire Amnesty Program by visiting every county in Kentucky and offering citizens a one-time opportunity to dispose of waste tires at no cost. A key provision in the contracts required all collected tires to be beneficially reused in some manner, such as in engineering applications or as tire-derived fuel.

According to DWM Director Rob Daniell, the cabinet's tire mission involved a three-prong attack. "A tire problem, from a solid waste perspective, is not an issue that will just go away with time," he said. "Kentucky generates more than four million waste tires annually, and we needed an effective management system. We implemented an action plan to address three important areas, including the abatement of existing abandoned tire piles, creation of markets for waste tires and an amnesty program for all counties."

Daniell said the state is now in firm control of the waste tire issue. Along with the successful Tire Amnesty Program, the state has eliminated 29 major tire piles containing more than 3.3 million tires using the tire fund. In addition to the Owensboro Municipal Utilities partnership (see adjacent story), market development efforts continue with Dravo Lime Inc. of Maysville to burn waste tires as fuel in the company's lime kiln. Dravo hopes to eventually burn six million tires annually.

"When the General Assembly created the Tire Amnesty funding mechanism, they stipulated that the \$1 tax on new tires would cease at the end of June 2002," said Daniell. "We've shown what we can accomplish with proper funding. It will be up to the Kentucky legislature to decide if the state needs to continue funding the Waste Tire Trust Fund."



Forest fires

worst in more than a decade

By Julie Smither
Office of the Secretary



In a fall fire season that saw fires burning throughout Tennessee, Virginia, North Carolina and Georgia, the greatest number of acres were burning in Kentucky. More than 590 fires, mostly in eastern and southeastern Kentucky but scattered throughout the state, charred more than 140,400 acres last fall through the month of November. It was Kentucky's worst fire season since 1987 when 285,000 acres burned. Almost all the fires were intentionally set.

Autumn's dry conditions created hazardous fire situations. Little rain and low relative humidity, plus many areas of pine trees recently killed in the Southern pine beetle infestation, made Kentucky's forests a victim to arson.


The effect of these fires went beyond charring Kentucky's forests. The fires' thick smoke caused problems throughout the state. Particularly affected was eastern Kentucky, where most of the fires were burning. In Pike County, the heavy smoke set off school fire alarms, prompting officials to close some area schools. Hospitals saw an increase in patients with respiratory illnesses. State officials issued health warnings when winds from the southeast moved smoke into the northern portions of the state, pushing Louisville's air quality near the unhealthy range. The smoke reduced visibility, causing several traffic collisions. Smoke lay thick over the Bluegrass.

More than 2,000 firefighters battled the blazes on private land and in the Daniel Boone National Forest. The Kentucky National Guard provided 200 soldiers and six aircraft to assist on the ground and in the air. The USDA Forest Service, the Americorp's St. Louis Partners Emergency Response Team and the Bureau of Indian Affairs sent firefighters, as did Mississippi,

Florida and Louisiana. Several correctional facility crews, prisoners and guards trained by the Kentucky Division of Forestry, and many local agencies and entities participated. Crews worked 16-hour days with few days off, and only a few minor injuries were reported.

Efforts increased to find those responsible for setting the fires. The Kentucky Target Arson Hotline received calls from local citizens fed up with the destruction of their natural resources, resulting in five arrests and several on-going investigations. Callers to the hotline at 1-800-27-ARSON may remain anonymous and are eligible for a cash reward of up to \$1,000 for information that leads to an arrest and indictment. Arson is a felony and punishable by fines of \$1,000 to \$10,000 and/or up to five years in prison.

"We needed the public's help in identifying the people setting these fires, and citizens responded loudly," said Leah MacSwords, Division of Forestry director. Forest fires cost Kentucky taxpayers millions of dollars each year. Final figures are unavailable at this time, but the Division of Forestry expects the cost to exceed the \$4 million spent on fire suppression in 1999 when 139,000 acres were burned.

For more information, see the division's Web site at www.kyenvironment.org/nrepc/dnr/forestry/dnrdf.html 

BACKGROUND: *Forest fires in Kentucky burn low to the ground damaging the lower portion of most trees in fire stricken areas.*

UPPER LEFT: *Firefighters install a fireline around a fire to prevent the fire from spreading.* Photographs by Cary Perkins, Division of Forestry

Patton orders temporary halt to permits

By Department for Surface Mining Reclamation and Enforcement staff

Gov. Paul Patton, listening to concerns that regulations covering noncoal mining may not be stringent enough, has ordered a temporary halt to the issuance of noncoal mining permits.

Noncoal resources in the state include limestone quarries, sand and gravel operations, and clay pits. The Department for Surface Mining Reclamation and Enforcement's (DSMRE) Noncoal Branch has 211 sites permitted, totaling 37,809 acres.

Laws and regulations for the noncoal industry do not mirror the requirements that the coal industry must follow, commonly referred to as the Surface Mining Reclamation and Control Act, based on Public Law 95-87. All regulations enforced by the DSMRE are based strictly on laws developed by the Kentucky legislature. The Kentucky Administrative Regulations (KAR) pertaining to these quarries and mines were last revised in 1995 (see box below).

During the suspension period, the cabinet is directed to review all current laws and regulations related to noncoal mining. This study will evaluate the cumulative impacts of continuing with the

What is the law?

The current laws and regulations that pertain to the mining of noncoal minerals in Kentucky can be viewed on the Kentucky legislative Web site at <http://www.lrc.state.ky.us/kar/TITLE405.HTM>

KRS Chapter 350, in pertinent part, requires the cabinet to promulgate administrative regulations pertaining to noncoal mineral operations to minimize their adverse effects on the citizens and the environment of the Commonwealth.

Begin your search with laws: KRS 350.010(2), 350.240, 350.300; Statutory Authority: KRS Chapter 13A, KRS 350.028, 350.029, 350.240, 350.300; and Kentucky Administrative Regulations 405 KAR 5:001 through 5:096.



current status quo and the effects of additional environmental enhancement.

Tom FitzGerald, executive director of the Kentucky Resources Council (KRC), has suggested that additional measures are needed to protect the citizens and the environment. Guidelines recommended by the KRC include:

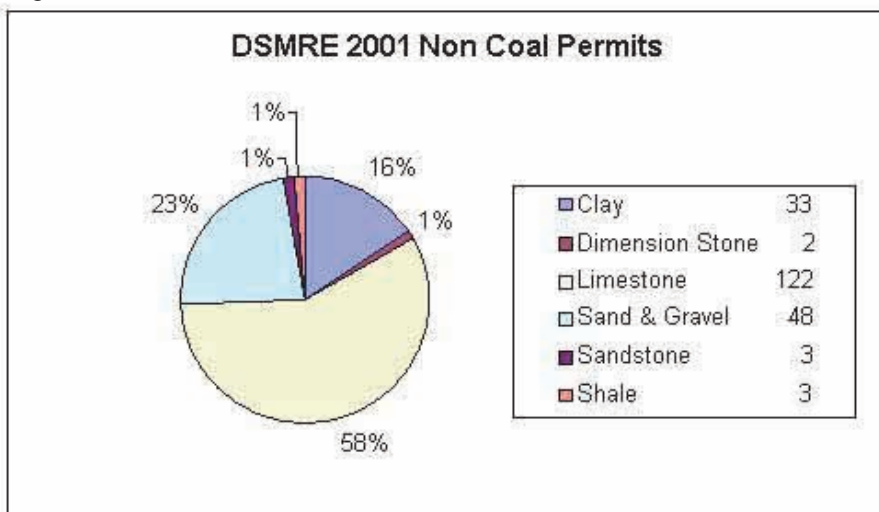
- Declaring some acreage entirely off limits for mineral exploitation.
- Requiring more baseline environmental information on areas to be mined.
- Demanding dust control, groundwater protection and soil-handling plans.
- Mandating better control of blasting practices and haulage routes.
- Limiting the hours of operation, noise and light levels.

- Ensuring better reclamation and/or higher and better post-mining use.
- Raising bond requirements to meaningful levels.

In addition to issues being studied by the DSMRE, the Division for Air Quality and the Division of Water are reviewing the regulations on air and water quality pertaining to noncoal permits. The Transportation Cabinet is also preparing a report on the cost of building and maintaining the Commonwealth's roadways.

The cabinet was to report their findings to Gov. Patton by Jan. 1, so that recommendations, if needed, can be made to the 2002 General Assembly. ✕

Photograph and chart provided by the Department for Surface Mining Reclamation and Enforcement



Waste issues top legislative agenda

By Mark York
Office of the Secretary

The 2002 General Assembly is expected to again tackle waste issues facing the Commonwealth. Among those issues are a comprehensive solid waste bill to address illegal dumps, historic landfills and environmental education as well as legislation for waste tires and hazardous waste.

Gov. Paul Patton is expected to announce an administration solid waste bill in early January to include the clean up of illegal dumps and old municipal landfills, funding for environmental education and litter control. The 2001 Legislature considered several solid waste bills, but did not pass any into law.

Patton initiated the Kentucky Certified Clean County (KCCC) program in March 2001 after the legislature failed to enact a solid waste bill. Through the KCCC program, which involves a comprehensive survey of illegal dumps in each county, thousands more illegal dumps have been located than previously reported by counties (see *Washington County thrilled to be first Certified Clean County* on page 1).

In addition to illegal dumps, there are an estimated 500 old, municipal landfills that were not properly closed or have been abandoned by private operators. Some of these landfills pose a significant environmental threat to local communities and most cities and counties cannot afford to characterize and remediate the sites (see *Kentucky identifies and evaluates its 'orphans'* on page 11).

Funding a comprehensive solid waste bill has been a key sticking point in previous sessions. Since 1998, Rep. Greg Stumbo, D-Prestonsburg, has sponsored legislation that proposed a refundable deposit on most beverage containers. Other funding mechanisms discussed in previous years include an advanced disposal fee for containers and an increase in landfill tipping fees to pay for environmental programs.

The Natural Resources and Environmental Protection Cabinet is also expected to have legislators sponsor bills to extend the waste tire fee and the Hazardous Waste Assessment Fee. Both fees are scheduled to expire next year unless the general assembly takes action during the 2002 session.

The waste tire fee has been used the past four years to clean up waste tire piles across the state and fund a Tire Amnesty Program in every Kentucky county. Under the amnesty program, citizens could drop off waste tires, at no charge, and a contractor hired by the state would chip the tires and transport the material (see *From waste to fuel* on page 3).

During the cleanup of waste tires and the amnesty program, more than nine million waste tires have been collected. Kentuckians generate about four million waste tires every year (see *Kentucky's attack on tires* on page 4).

Generators of hazardous waste in the state pay the Hazardous Waste Assessment Fee. The assessment is one-and-two-tenths cents per pound (\$0.012) if the waste is liquid or two-tenths of a cent per pound (\$0.002) if the waste is solid.

The fee is used to pay for the cleanup of major hazardous waste sites across the state and also funds the Department for Environmental Protection's Environmental Response Team program.

The fee was set to expire June 30, 2000, but the 2000 General Assembly extended the fee for two more years.

This large tire dump in Owen County was recently cleaned up by a recycling company contracted through the Tire Amnesty Program. Photograph by Fred Kirchhoff, Division of Waste Management

Winter heating

By Karen Landry
Division of Energy

For those who heat their homes with natural gas and propane, this winter is promising to be much easier on the pocketbook—as this article goes to press natural gas prices are averaging 29 percent lower and propane 13 percent lower than they were last year. Assuming normal weather, winter heating bills for residential consumers could average from \$170 to \$320 lower this winter than last winter. This is good news, especially for those natural gas customers who are still trying to catch up on last year's bills.

So why the dramatic change from last year? Namely, natural gas and propane inventories are higher than last year's, and demand has weakened.

Last winter, natural gas inventories were lower than normal, whereas this year they are 13 percent higher than they were a year ago. In fact, in mid-November, we were just shy of an all-time record in natural gas storage levels.

Natural gas is injected into pipelines every day and transported to millions of consumers all over the country. Most of the natural gas used in the United States is produced domestically, with the remainder imported primarily from Canada. Domestic gas production and imported gas are generally more than enough to satisfy customer needs during the summer, and a portion of supplies is placed into storage facilities. During the summer, natural gas is used primarily for manufacturing and electric power generation, as well as in the residential sector for cooking and water heating. During the winter months, residential heating requirements increase total demand for natural gas that exceeds production and import capabilities. Withdrawals of gas from storage provide the extra needed to meet customer requirements. So, having

adequate supplies in storage at the start of the heating season is an important part of meeting winter demand.

Inventories this year have increased for a number of reasons. One is that natural gas drilling has increased in the last year in response to higher prices—that is, producers had more of an incentive to drill for natural gas when wholesale prices were higher. Likewise, when prices were low, as they were for much of 1998-1999, drilling activity slowed dramatically. Now, with lower wholesale prices and reduced demand, the cycle continues and we can expect drilling activity to decrease somewhat in response.

Another reason for increased natural gas inventories is, unfortunately, the economic slowdown affecting the entire country. The manufacturing sector of our economy uses 45 percent of the natural gas in the United States for plant operations.








Residential and electric generation account for 39 percent. With a slow economy, manufacturing output is reduced, thereby reducing the need for natural gas. The reduced demand in manufacturing means more natural gas has gone into storage, helping to ease prices.

Mild weather leading into the heating season has also helped to keep wholesale prices down and inventories up—thus contributing to this winter's lower prices. Demand for all heating fuels increased last winter because of colder than normal temperatures early in the heating season. Heating demand is expected to be about seven percent lower than it was last winter, when the weather was about seven percent colder than normal.

Finally, last year's high natural gas prices helped to curtail electricity generation from natural gas-fired turbines



Energy Saving Tips

-  Set your thermostat as low as is comfortable.
-  Replace furnace filters once a month during the heating season.
-  Clean warm-air registers, baseboard heaters and radiators as needed.
-  Use kitchen, bath and other ventilation fans wisely; in just one hour, these fans can pull out a houseful of warmed air.
-  Keep draperies and shades on your south-facing windows open during the day to allow sunlight to enter your home, and close them at night.
-  Keep your fireplace damper closed unless a fire is going.
-  If you heat your home with a heat pump, do not set back the thermostat manually if it causes the electric resistance heating to come on when you return the thermostat to your normal setting.

(natural gas is used to generate 15 percent of the country's electricity). This reduced demand, helped to increase inventories and reduced prices as well. Mild weather and effective conservation efforts on the West Coast also have helped to reduce electricity demand, and thus demand for natural gas.

When last year's wholesale natural gas prices skyrocketed, the utility companies passed that increase on to consumers to recover their costs. Likewise, as the wholesale prices have dropped in the last year, so too have retail prices. All of Kentucky's natural gas companies have passed the reduced costs to Kentucky customers. Lower natural gas costs should not reduce the need to save energy this winter.

For more information, see www.kyenvironment.org/nrepc/dnr/energy/doesmarthome.htm



Programmable thermostats, like the one shown above, are available at most home improvement stores.

What do Abraham Lincoln's boyhood home and Crowe's Chase in Kentucky have in common? More than you might think, because both were purchased with grants from the Kentucky Heritage Land Conservation Fund (KHLCF). Both projects are unique in their own right.



Two projects become reality

By Mary Jean Eddins
Department for Natural Resources

Lincoln's Boyhood Home

"The place on Knob Creek ... I remember very well; but I was not born there. My earliest recollection, however, is of the Knob Creek place," wrote Abraham Lincoln in 1860. Lincoln was referring to the Larue County home where his family settled from 1811 to 1816. The homestead and surrounding 225 acres was, until recently, the only property connected to Abraham Lincoln that was not a state or national park.

The opportunity to purchase the property presented itself a few years ago. A group of local citizens, called "Friends of Abe Lincoln," began looking at ways the property could be preserved as a public park. Since the National Park Service (NPS) was already located in Larue County at the nearby Lincoln Birthplace, the group approached the NPS about purchasing the boyhood home as well. Although the NPS was enthusiastic

about acquiring the property, it would only be possible through donation. The Friends of Abe Lincoln immediately began lobbying for federal legislation allowing the NPS to accept and maintain the property if it was donated.

In 1998, Congress passed the legislation, and the Friends of Abe Lincoln immediately began raising funds to secure a \$15,000 option on the property. At the same time, the group approached Larue County Judge-Executive Tommy Turner for his assistance with finding the remaining \$985,000 necessary to purchase the property.

Judge Turner contacted the governor's office and was successful in securing a \$500,000 appropriation in the 2001-2002 Commonwealth of Kentucky budget for the actual homestead and five acres. However, they were still short \$485,000.

Judge Turner sought the assistance of the Lincoln Resource Conservation and Development (RC&D) Council. The Lincoln RC&D knew about the Kentucky Heritage Land Conservation Fund (KHLCF) program and a grant application was submitted. The KHLCF board awarded \$504,500 for the 225 acres surrounding the Lincoln boyhood home, survey and appraisals of the property.

The KHLCF Board reimbursed the Larue County Fiscal Court for the

purchase of the surrounding acres and passed a resolution allowing the property to be transferred to the National Park Service. An official ceremony celebrating the transfer will take place in February, around the time of Lincoln's birthday.

"The National Park Service is extremely pleased to accept Abraham Lincoln's Boyhood Home at the Knob Creek Farm as a donation from the Larue County Fiscal Court," said Abraham Lincoln Birthplace Superintendent Ken

Apschnikat. "After three years and much hard work by many generous individuals and several local, state and national organizations, the

property will be protected, interpreted and preserved as a part of the Abraham Lincoln Birthplace National Historic Site." The success of this project is clearly a great example of numerous governmental agencies, local groups and citizens working together to accomplish the preservation of a historical landmark and natural area, significant not only to Kentuckians, but to all citizens of the United States. Dr. William H. Martin, chair of the KHLCF Board, said, "The board is once again extremely pleased to have played a part in the purchase and preservation of a significant natural area in Kentucky. The historical significance is like icing on a cake. It is very rewarding to be part of this."



"The board is once again extremely pleased to have played a part in the purchase and preservation of a significant natural area in Kentucky."

Dr. William H. Martin

Crowe's Chase

From their first purchase of 125 acres about 25 years ago to several recent additions, Mike and Jeanne Crowe have managed their land with one primary goal—to improve wildlife habitat and preserve the land's many natural features. With that in mind, the Crowes sought the help of the Kentucky Department of Fish and Wildlife Resources and the Kentucky Division of Forestry and implemented a forest stewardship plan more than a decade ago.

Over the years, the Crowes welcomed various groups, including the Kentucky School for the Blind (KSB), to use their property for outdoor educational activities. They especially encouraged outings that paired disabled children together with children who did not have disabilities.

More recently, the Crowes began wondering what would happen to their land when they were no longer able to care for it. Mike Crowe, who has lived with a form of muscular dystrophy for many years, was finding it increasingly difficult to oversee the entire 400 acres they now own. They insisted that the property be maintained as a natural area and not be sold to developers.

Upon hearing about the Crowe's situation, KSB Superintendent Ralph Bartley thought the property would be a great place to develop an environmental education facility designed for blind and visually impaired persons—one that would be developed from the "ground up" and not retrofitted. Accessibility would be accomplished by identifying areas on the property where animals, plants, springs and trees could be appreciated through the senses of sound,



touch and smell. It was a great plan, fully endorsed by the Crowes, but funding for the project had to be located.

In their efforts to find a way to preserve their land, the Crowes became aware of the KHLCF Board. The KSB, through the Kentucky Department of Education, was considered an eligible applicant, and last September the 300-acre Crowe purchase was finalized.

Over the next several years, Crowe's Chase, as the property is now referred to, will be developed to provide outdoor environmental education opportunities for all Kentuckians, with a special emphasis on accessibility for blind and visually impaired visitors.



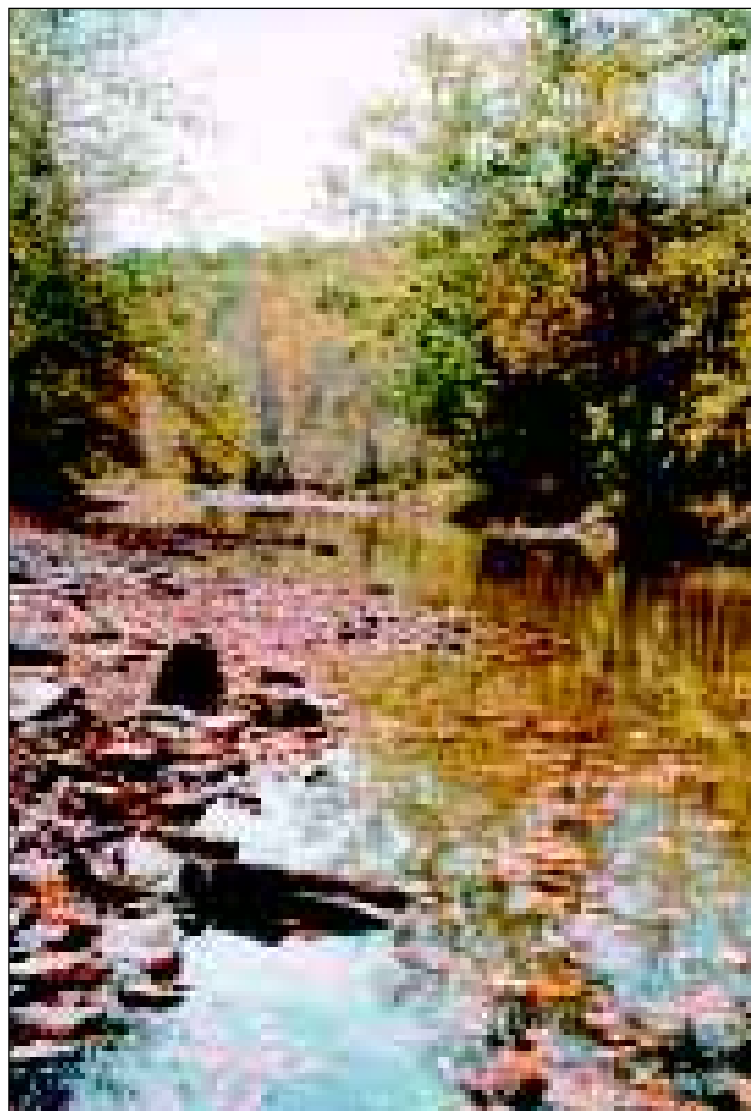
Do you have a Kentucky nature license plate? If so, pat yourself on the back! The extra \$10 you spent to acquire the plate was used to help fund the purchase of Lincoln's boyhood home, Crowe's Chase and numerous other projects across the Commonwealth. If you don't have a nature license plate, please consider purchasing one the next time you renew your license plate.

If you have questions about the KHLCF program or Kentucky nature license plates, contact Mary Jean Eddins at (502) 564-2184 or e-mail mary.eddins@mail.state.ky.us. Information is also available at www.kyheritageland.org

OPPOSITE PAGE (LEFT): *The entrance sign to the park. (TOP):* *The cabin still stands where Abraham Lincoln's family called home until 1860.*

THIS PAGE (LEFT): *A Great spangled fritillary (Speyeria cybele) rests on an Ox-eye daisy (Chrysanthemum leucanthemum) inside the park.*

BELOW: *Six Mile Creek runs through a substantial portion of the Crowe's Chase property.* Photographs provided by the Lincoln Resource Conservation and Development Council and Jeanne Crowe.



Kentucky identifies and evaluates its ‘orphans’

By Matt Hackathorn
Division of Waste Management

The word ‘orphan’ normally refers to a child whose parents are dead, but officials from the Kentucky Division of Waste Management (DWM) have been spending time with orphans left to Mother Nature.

Where Kentucky’s environment is concerned, the word “orphan” refers to old solid waste disposal facilities that operated prior to state permitting laws. Today, many such facilities may contribute to human health and environmental problems across the state.

Last summer, waste management inspectors began studying orphan landfills in an effort to update records and identify problems, such as leachate discharge (contaminated rainwater and other liquids that percolate through disposal areas into surface waterways and groundwater). The cabinet also wanted to provide policymakers with accurate background data on the issue before January’s legislative session began.

“The cabinet hopes the Kentucky General Assembly will consider passing solid waste legislation that offers a funding mechanism for cleaning up environmental problems across the state caused by these sites,” said DWM Director Rob Daniell, who coined the phrase “orphan landfill” to distinguish between historic, nonpermitted facilities and those that operated a little later under formal permits.

Kentucky established its first solid waste management laws in the late 1960s following the creation of the Federal Solid Waste Disposal Act of 1965. Daniell said his division currently has 592 orphan landfills on record.

An example of an orphan landfill that caused problems last year was an old, municipal disposal facility discovered



Field investigators from the Division of Waste Management spent last summer identifying, marking and evaluating the conditions of nearly 600 orphan landfills in Kentucky. Environmental officials say these old, nonpermitted disposal facilities are located near residential areas, in open fields, on farms, and against creeks and other waterways across the state.

beneath the Briar Hill residential neighborhood in Georgetown, Ky. The old “city dump” had apparently operated during the 1950s, but Daniell said his office had no record of its existence. (The Division of Solid Waste, which evolved into the DWM, was created in 1973.) The city of Georgetown eventually took steps to purchase 19 Briar Hill homes and

relocate citizens away from properties laden with high levels of heavy metals and other potentially harmful compounds.

Last summer environmental inspectors spent about 45 days identifying and investigating Kentucky’s orphan landfills. About eight percent of the sites investigated uncovered problems. “We’ve determined that some of those sites have leachate discharge and cover erosion with exposed waste,” said Field Operations Branch Manager Bill Burger. “In other instances we found that people are still illegally dumping and burning trash, either on top of or near former disposal areas.”

According to Solid Waste Branch Manager Ron Gruzesky, the concern over orphan landfills lies within each site. “Those facilities operated prior

to the establishment of any environmental laws, so just about anything was probably dumped in them,” he said. “Forty to 50 years ago and beyond there was no distinction between hazardous waste and solid waste. Back then, industries could legally dispose of solvents and other harmful chemicals at facilities that had no means to stop contaminants from entering the environment. We see evidence of that frequently.”

Since last summer, the DWM has made steady progress identifying, marking and evaluating the conditions of the 592 known orphan landfills that dot Kentucky’s landscape. When the initiative began, Daniell’s office sent about 550 letters to city and county officials across the state asking for help identifying historic disposal facilities. The division received 59 positive responses to add to its list.

“Obviously, the liability issue is a factor when it comes to asking for help in identifying orphan landfills,” said Daniell. “Local governments and individual landowners are concerned about having to pay to correct any problems that may exist. However, our current mission is not to point fingers and determine individuals responsible for corrective action, but rather to verify the existence and extent of the problem to help policymakers develop a comprehensive approach to solving it.”



Orphan landfills

Major conservation initiative announced

By Steve Coleman
Division of Conservation

Thousands of acres of land will be protected thanks to a conservation project announced last summer. The U.S. Department of Agriculture (USDA) and the Commonwealth of Kentucky reported that eight counties would take part in the largest soil and water conservation project in the history of Kentucky.

The Green River Conservation Reserve Enhancement Program (CREP) launched a \$110 million restoration project to revive and protect up to 100,000 acres of environmentally sensitive land near and around the Mammoth Cave area and the Green River. Eight counties, including Adair, Barren, Edmonson, Green, Hart, Metcalfe, Russell and Taylor, will participate in this project. There is more than 100 miles of river that flows through these counties, which ultimately flows through Mammoth Cave, the world's largest and most diverse cave system.

The Kentucky CREP is a voluntary program that provides financial incentives to farmers that enroll in long-term contracts to remove their land from agricultural production. The project's goals are reducing by 10 percent sediment, pesticides and nutrients entering the water system; establishing buffers and filter strips adjacent to streams, rivers and sinkholes; enhancing wildlife habitat and providing assistance to landowners seeking to participate in the program. These contracts, lasting 10 to 15 years, will ensure long-term protection of water quality and improve wildlife habitat, while at the same time enhancing long-term viability of agriculture production in the area.

Producers can offer land in any part of the designated watershed below the Green River Lake Dam to the Mammoth Cave National Park boundary. Applicants must satisfy the basic eligibility criteria that land be owned or operated for at least one

“This results-oriented project, with measurable objectives, will ensure improvements to the environment that will outlast us all and make this a better place for our children and grandchildren.”

Secretary James Bickford

year prior to enrollment, and that the land be cropped two out of the past five years. Marginal pastureland is also eligible to be enrolled provided it is suitable for use as a riparian buffer planted with trees.

During the official signing ceremony last August, Natural Resources and Environmental Protection Cabinet Secretary James Bickford stated, “The signing of this agreement launches an aggressive fifteen-year initiative to protect this nationally important resource in the Green River Watershed. This results-oriented project, with measurable objectives, will ensure improvements to the environment that will outlast us all and make this a better place for our children and grandchildren.” Bickford also stated that the cabinet is committed to fulfilling its obligation to the agreement and is looking forward to the improvements that will take place in the Upper Green River region.

The U.S. Department of Agriculture will provide \$88 million toward the project; the Commonwealth \$17 million; and the private sector \$5 million. The Nature Conservancy of Kentucky will

supply financial incentives to extend the life of the program and will seek to buy voluntary permanent conservation easements. The state will furnish additional Soil Erosion and Water Quality Cost Share funds and other incentives to help producers in the installation of Best Management Practices (BMPs) that convert cropland to permanent vegetative cover, trees and grasses in the riparian areas along the Green River. The federal government will assist with the cost of installing BMPs, annual per-acre rental payments and annual maintenance fees on enrolled acres.

For additional information on the Green River CREP project, contact your local conservation district, USDA Service Center, or state offices of the U.S. Farm Service Agency, U.S. Natural Resources Conservation Service, Kentucky Department of Fish and Wildlife Resources, Kentucky Division of Forestry, Division of Conservation or The Nature Conservancy of Kentucky.



(Standing left to right) Secretary James Bickford; Dept. of Agriculture Commissioner Billy Ray Smith; The Nature Conservancy of Kentucky Director Jim Aldrich; and U.S. Farm Service Agency State Executive Director Jeff Hall. (Sitting) U.S. Dept. of Agriculture Deputy Under Secretary Hunt Shipman and Governor's Executive Cabinet Secretary Crit Luallen sign the official documents during a ceremony in August. Photo provided by Creative Services

Group works across state lines

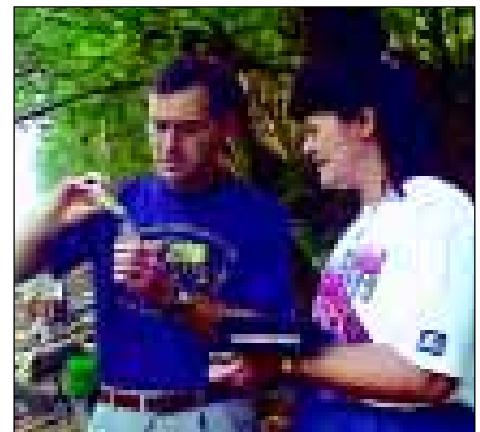
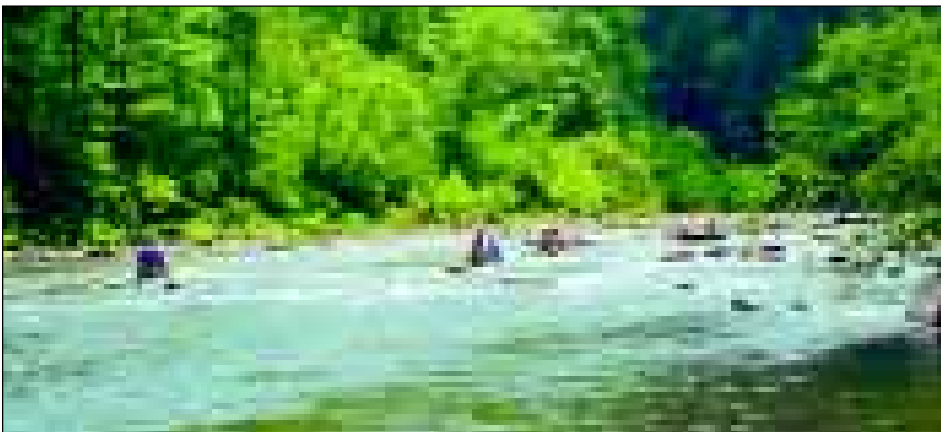
By Ken Cooke
Division of Water

When you are on the Tug Fork River at 37.537 latitude and -81.967 longitude, you are keenly aware of the current, waves, tree-lined shores and beauty of the remote region. However, depending on where your boat drifts, you could be in Virginia, Kentucky or West Virginia, because the river knows no political boundaries.

The Big Sandy River Watershed Watch, a group of volunteers who have organized to monitor the quality of water in the Big Sandy River Basin, has agreed to work beyond state lines and consider the watershed as a whole.

Started in 1999 as part of the statewide watershed watch initiative, Big Sandy River Watershed Watch has been recruiting and training volunteers to monitor the creeks and rivers in Lawrence, Martin, Floyd, Johnson, Elliott, Pike and Boyd counties. With initial funding from PRIDE (Personal Responsibility in a Desirable Environment), the group has organized more than 45 monitoring teams to collect samples at more than 65 sites in the Kentucky portion of the watershed.

Dr. Thomas Vierheller and Paul Thompson of Prestonsburg Community College serve as science advisors to the project and



TOP: Dr. Thomas Vierheller, Prestonsburg Community College, trains teachers and community volunteers about water quality monitoring on the Levisa Fork of the Big Sandy River. **ABOVE LEFT:** Canoeing on the Tug Fork of the Big Sandy River at the point that Virginia, West Virginia and Kentucky join. **ABOVE RIGHT:** Dr. Vierheller shows a teacher how to sample for dissolved oxygen on the shore of Levisa Fork. Photos by Ken Cooke

also supervise the sampling events. Volunteers collect samples and deliver them to professional labs in the region for analysis. They monitor streams for fecal coliform, sulfates, nitrates, phosphorus, suspended solids, oil and grease and a host of other constituents. Each monitoring team is equipped with field testing kits that can measure for dissolved oxygen, conductivity, temperature and pH.

Last September, the Big Sandy River Watershed Watch conducted a tri-state monitoring event involving volunteers in all three states in the basin. Volunteer teams from West Virginia and Virginia were trained in monitoring protocols identical to those used in Kentucky. The group sampled more than 75 stations. Volunteers, recruited from all three states, collected samples and sent them to the same labs for analysis.

The results will be provided to project volunteers who will meet to discuss their findings at a tri-state watershed conference

April 5-6, 2002, at the Breaks Interstate Park. There they will compare results and discuss plans for improving the watershed with state and federal resource management agencies.

By working across state lines, the Big Sandy River Watershed Watch is able to focus the attention of a number of agencies from all three states.

In addition to the Kentucky Division of Water and PRIDE, the project receives support from the West Virginia Department for Environmental Protection and the Virginia Department of Environmental Conservation. All provide technical support for the volunteers.

In order to protect a watershed like the Big Sandy, resources, expertise and efforts need to flow as freely across state lines as the water itself.

For more information on this project visit <http://ky.water.org/bsr/>



Students wade knee deep into science

By Ken Cooke
Division of Water



Students from Chavies Elementary School in Perry County, Kentucky, check nearby creeks for living organisms.
Photo by Cathy Smith, Chavies Elementary School

Students are using the scientific method to evaluate pollution impacts on streams in the community. "Before you can solve a problem, you have to understand its nature.

This activity gives

them the tools to do so," said Combs.

Organizing thousands of students and hundreds of teachers is no small effort. PRIDE staff member Cathy Hall has the responsibility for planning the campaign and recruiting volunteers to gather the collected samples from the schools. Samples have to be delivered to the lab within six hours of collection under carefully controlled conditions in order for the samples to be valid. The project used seven different laboratories for the analysis.

The best way to tell how clean a stream is, is by finding out what is alive in it.

Thousands of science students from more than 200 schools across southeast Kentucky have seen first hand what's alive in creeks near their schools and homes as part of the Clean Streams Program sponsored by PRIDE. PRIDE stands for Personal Responsibility In a Desirable Environment and is a grassroots effort to address the problems of illegal dumps, straight sewer pipes and environmental education in the 40-county area of southeast Kentucky.

Teachers are provided with training on conducting the biological assessments. The Kentucky Water Watch Program and PRIDE provided water quality monitoring equipment and containers to schools so that samples could be sent to the lab for analysis.

Last October more than 260 sites were sampled for fecal coliform bacteria, in addition to field chemistry and biological samples the students were instructed to collect.

The data from that analysis is being returned to the students who are being asked to draw conclusions about water quality in their community. They will use their own observations as well as reports from other schools in the region.

"It is a good experience for my students," said Ralph Combs, science faculty at Perry Central High School.

Students and teachers report their data over the Internet to the PRIDE Clean Streams Web site. They also take digital pictures of their streams to share as well. PRIDE sponsors a video teleconference in the spring where schools discuss their data with officials in Frankfort and Washington D.C. Natural Resources and Environmental Protection Cabinet Secretary James E. Bickford, along with the director of the Division of Water and Congressman Harold "Hal" Rogers, listen as students report their findings at the conference. ☒

For more information

To view the field reports and lab analysis, visit the PRIDE Clean Streams Web Page at <http://www.kypride.org/cleanstreams.htm>

The Web site contains a registration page for teachers from the PRIDE region who would like to sign up.

Additional workshops will be held in the spring with the next sampling event scheduled for April 2002.

View additional photos at http://pride.state.ky.us/pride_exec.ppt

Kentucky hosts Region IV conference

John Cotten, director of the Kentucky Division of Value Added Wood Promotion, was one of the guest speakers at a conference for Small Business Assistance Providers for the U.S. Environmental Protection Agency Region IV states. The Department for

Environmental Protection and the Kentucky Business Environmental Assistance Program (KBEAP) hosted the conference last fall.

Cotten discussed the importance of small businesses in Kentucky developing partnerships with trade associations and business organizations.

Staff from eight Region IV states met to share information about improving assistance to small businesses that must comply with the Clean Air Act.

For information about the Small Business Assistance Program, contact Rose Marie Wilmoth at (502) 564-2150 or Gregory Copley, KBEAP, at (800) 562-2327. Photo by Eric Byrd, KBEAP





Louisville meets 1-hour ozone standard

By Lona Brewer
Division for Air Quality

Recent actions by the U.S. Environmental Protection Agency (EPA) and the 6th Circuit Court in Cincinnati have had impacts on air quality designations in portions of Kentucky. The EPA proposed to designate the Louisville area, including portions of Bullitt and Oldham counties, to attainment for the 1-hour ozone standard. The 6th Circuit Court in Cincinnati overturned the attainment designation for the Cincinnati area which includes Boone, Campbell and Kenton counties.

The 1-hour ozone standard is set by the EPA and is one of several National Ambient Air Quality Standards set to protect public health and the environment. Compliance with the standard is based on a rolling three-year period. Up to three exceedances are allowed in a three-year period. If an air quality monitor records more than three exceedances, the area is considered in violation of the standard.

Ozone is a colorless gas that forms in the atmosphere from a photochemical reaction between volatile organic compounds (VOCs) and nitrogen oxides (NOx) in the presence of sunlight. Ozone can irritate and damage the respiratory system and may produce long-term or chronic illnesses. People who have underlying health problems such as asthma and emphysema, the very young, the elderly or people who work outdoors are more susceptible to the harmful effects of ozone.

The EPA's proposal to change the Louisville area to attainment of the 1-

hour standard is a huge success story for Kentucky. Jefferson County historically has not met the ozone standard since designations began in the early 1970s. This change to attainment comes after many years of implementing programs in the Louisville area, including southern Indiana, to reduce emissions of both volatile organic compounds and nitrogen oxides. The EPA action became effective Nov. 23, 2001.

The EPA's proposal to change the Louisville area to attainment of the 1-hour standard is a huge success story for Kentucky.

In January 2001 Kentucky submitted a request to the EPA for a clean data finding, which would represent EPA's agreement that the Louisville metropolitan area (including Floyd and Clark counties in Indiana) had 1-hour ozone monitoring data in compliance with that National Ambient Air Quality Standard.

Kentucky formally requested a revision to the State Implementation Plan for the Louisville area to be designated as attainment. The request included a maintenance plan that provided a determination that emission levels associated with attaining the standard could be maintained for the next 12 years.

Some of the programs in the Louisville area designed to improve air quality include the vehicle emissions testing program, reformulated gasoline and reasonably available control technology requirements for sources with large emissions of NOx and VOCs.

Similar actions had previously been taken for the northern Kentucky area. After several attempts, Boone, Campbell

and Kenton counties (part of the Cincinnati metro area) were designated as meeting the 1-hour ozone standard. That designation became effective on July 5, 2000. That particular area, like Louisville, historically had not been able to meet the standard. However, in September, the 6th Circuit Court in Cincinnati reversed the EPA's designation to attainment for the Cincinnati metropolitan area, including Boone, Campbell and Kenton counties in

northern Kentucky. This area has now reverted back to nonattainment status.

Therefore, since redesignation to attainment was overturned, all

requirements under the 1990 Clean Air Act appropriate for a moderate ozone nonattainment area once again became requirements for northern Kentucky/Cincinnati area. This included the requirement for a vehicle emissions testing program and a 15 percent VOC emission reduction requirement.

Air monitoring in the region shows continued compliance with the 1-hour ozone standard through 2001, and Ohio is taking steps to correct the deficiencies that led to the revocation of the attainment designation. This designation means that large industries coming into those counties or existing industries wishing to expand operations will have to meet more stringent emission control requirements.

The EPA is researching how best to proceed with this interstate area. However, for the present time, the Cincinnati metropolitan area including Boone, Campbell and Kenton counties are considered as a moderate ozone nonattainment area.



Web Watch



Daily forest fire information online

By Julie Smither
Office of the Secretary

The 2001 fall fire season was one of Kentucky's worst. Fires throughout eastern Kentucky and in many other parts of the state kept firefighters and the Division of Forestry extremely busy for weeks (see *Forest fires—worst in a decade* on page 5).

Providing the latest information on these fires was a top priority, and the Division of Forestry utilized its Web site to maximum effect.

Three categories of information were provided, which were often updated on a daily basis: a map showing counties with burn bans, a fire situation report and press releases.

The Forest Fire Situation Report at <http://www.nr.state.ky.us/nrepc/dnr/forestry/Firereport.htm> provided the current number of fires, total acres burned, number of days since rain, counties affected and with the most fire activity, a forecast and a situation summary on manpower, equipment, hot spots and noteworthy information.

News reporters, county officials and other interested parties could get the current information they needed by checking this Web page on a daily basis.

The Internet once again proved to be a most efficient method of providing crucial information to Kentucky's citizens.

Drinking water information available online

By Jeff Grubbs
Division of Water

As part of its mission, the Drinking Water Branch (DWB) of the Division of Water provides an Internet site devoted to safe drinking water. The Web address is <http://water.nr.state.ky.us/dw/>.

"We use the Internet as a tool to provide information about drinking water," said Jeff Grubbs, Web developer for the DWB. "The content has primarily focused on technical information for people in the business of providing safe drinking water. At the same time, we want to communicate with the public on safe drinking water issues." Using the Internet helps reduce costs of printed materials and mass mailings to drinking water operators.

There are more than 400 pages on the DWB Internet site, from general drinking water facts to highly technical water treatment information. For anyone not familiar with the Safe Drinking Water Act and 1996 amendments, this Web site is a good place to start. Information is also available on safe drinking water for people who are not connected to a public water system but rely on private wells or cisterns as their water source.

One easy way to navigate the DWB site is to use the "Search" function using topics or keywords. Simply click on the "Search" button, type in the topic (or keyword) of interest and hit the "Enter" key. This will display all of the documents on the topic that are available from the Division of Water.

The DWB Web site averages about 250 site visits a week. "This is certainly a World Wide Web because there have been visits from England, France and Italy," said Grubbs. "It's reassuring to know that, globally, we are all striving to produce safe drinking water."

Visitors to the DWB Web site are encouraged to write or e-mail suggestions on topics they would like to see. Write to Jeff Grubbs, Drinking Water Branch, 14 Reilly Road, Frankfort, KY 40601, call (502) 564-3410 or e-mail Jeff.Grubbs@mail.state.ky.us.

This graphic indicates how the DWB Web site is viewed online. Access to topics are easily accessible and the "Search" feature makes finding information quick and simple. Graphic provided by the Division of Water



Partnering for a better tomorrow

Smart Growth Task Force reports to the Governor's Conference on the Environment

By Kerry Holt and Cindy Schafer
Office of the Secretary



The Governor's Conference on the Environment annually brings together those from the industrial sector, environmentalists, teachers, state and local governments and the general public to discuss environmental issues facing our Commonwealth.

Location, location, location.

According to the old saying, location makes a big difference when it comes to businesses wanting to put down roots in a new area of the United States. That means Kentucky must have a clean environment to attract the best jobs for its residents.

Gov. Paul Patton received a standing ovation for his keynote speech during the 26th annual Governor's Conference on the Environment where he stated, "One of the things we need to do to create the kind of jobs we want is to have the best environment in the nation."

Patton also congratulated the Natural Resources and Environmental Protection Cabinet for its efforts to catch illegal dumpers and eliminate straight sewer pipes, which run from

bathrooms directly into creeks and streams.

The governor's speech was followed by a panel presentation from the Smart Growth Task Force. The Governor's Executive Cabinet Secretary Crit Luallen moderated the panel of speakers that addressed the issues of land development to prevent urban sprawl throughout Kentucky. The task force was created to study growth and development, as well as a strategic approach to growth management and how it affects the state's prosperity by improving the quality of life and preserving its natural beauty.

Other topics discussed during the two-day event included environmental partnerships and energy issues facing Kentucky.

Environmental Excellence Awards presented

Several environmentally conscious businesses, organizations and citizens from all over the state were honored during the governor's conference. Natural Resources and Environmental Protection Cabinet Secretary James E. Bickford presented winners with a plaque during the annual awards banquet.

The following recipients were nominated because of their outstanding efforts to protect, manage and preserve Kentucky's natural resources. Read more details about this year's winners and their outstanding contributions to the environment by logging on to www.nr.state.ky.us/nrepc/governor/winners.htm.

Secretary's Award—This person or entity is personally selected by the cabinet secretary for outstanding contributions to protect and preserve Kentucky's natural resources. **Congressman Harold "Hal" Rogers** was

chosen for his grassroots PRIDE (Personal Responsibility in a Desirable Environment) initiative that addresses the problems of illegal dumps, straight pipes and environmental education in southeast Kentucky.

Forestry

WYMT-TV, Channel 57—This Hazard television station helped provide valuable news coverage relating to wildland fires to 22 counties in portions of eastern and southeastern Kentucky.

TOP: Gov. Patton addressed the audience on the second day of the conference. Seated is Natural Resources and Environmental Protection Cabinet Secretary James Bickford. Creative Services photo.
ABOVE: Secretary James Bickford presents Hal Rogers with an Environmental Excellence Award during the awards ceremony.

Photo by Kerry Holt.



Environmental Excellence Awards *(continued)*

Soil Conservation

David Kranz—The owner of Kranz farm uses his property for tours to promote best management practices to protect water quality.

Energy Conservation

Karen Reagor—As executive director of the KyNEED program, Reagor helps Kentucky teachers and students learn about energy through science-based, hands-on workshops.

Heritage Land Conservation

Kentucky Natural Lands Trust (KNLT)—KNLT helped preserve Blanton Forest, Kentucky's largest old-growth forest, by raising monetary support and teaching communities about the importance of the forest.

Mining Reclamation—Western Kentucky

Peabody Coal Co.—Nominated for its land reclamation methods, this company took a 50-year-old mine site and returned it to post-mining land use by planting

trees and shrubs, and dismantling mining structures.

Mining Reclamation—Eastern Kentucky

Thundercat Energy Corp.—This underground mine site in Johnson County was reclaimed as forestland use. Highwalls were reclaimed and topsoil replaced, along with reseeding of grasses to prevent erosion.

Pollution Prevention

Fort Campbell's Pollution Prevention Operation Center—Dedicated to minimizing waste, this center has received numerous awards for its leadership role in providing stewardship to Kentucky's environment.

Environmental Education

Cynthia Rowland—This Hiseville Elementary teacher involved her students in many environmental education activities, including creating an outdoor classroom and encouraging school recycling.

Community Environmental Leadership

Estill County Conservation District/Cumberland Valley Resource Conservation and Development Council—By joint effort, these two recipients implemented an initiative to improve the water quality in a community in eastern Kentucky.

Rowan County Solid Waste Management Program—With the help of its county judge-executive, this county developed a litter program that combines law enforcement with public education that has made a difference in the environmental outlook of its residents.

Industrial Environmental Leadership

Owensboro Municipal Utilities—Nominated for its efforts to rid the Commonwealth's countryside of waste tires (see *From waste to fuel* on page 3 of this issue to find out more about Owensboro Municipal Utilities).

Outstanding employees showcased

The cabinet also uses the awards banquet as an opportunity to showcase outstanding NREPC employees throughout the state. These men and women were nominated by their coworkers or supervisors for their unending dedication and commitment to keeping Kentucky beautiful.



TOP LEFT PHOTO (left to right) Department for Surface Mining Reclamation and Enforcement employees Tom Sussenbach, Kimberly Clements, Ramona Robinson, David Nickell and Robert Scott.

TOP RIGHT PHOTO (left to right) Department for Natural Resources employees Kerry Hayes, Sharon Eldridge and Maureen Gronefeld.

BOTTOM LEFT PHOTO (left to right) Department for Environmental Protection employees Corrine Wells, Kerry McDaniel, Andrea Wilson, Wesley Turner, Marlyn Godby, Anthony Hatton and Mike Goss.

BOTTOM RIGHT PHOTO (left to right) Office of Legal Services employee Ronald Mills; Office of Inspector General employee Scott Hatfield; and Division of Administrative Services employee Lisa Cox. Creative Services photos



Awards

MacGregor receives KSNPC award

By Brainard Palmer-Ball and Cecilia Bunch
Kentucky State Nature Preserves Commission

Every year, the Kentucky State Nature Preserves Commission (KSNPC) presents its Biological Diversity Protection Award to an outstanding individual who has demonstrated dedication and success in furthering the commission's goal of preserving the Commonwealth's biodiversity. The 2001 award recipient is John R. MacGregor of Jessamine County.

Originally from Ohio, MacGregor came to Kentucky in the early 1970s to pursue a master's degree at the University of Kentucky. He had always marveled at the great variety of Kentucky's herpetofauna (amphibians and reptiles), and his college years reinforced his desire to live here. He has called Kentucky his home ever since. MacGregor graduated from UK with a master's degree, then taught high school biology for a few years and worked as a Kentucky Transportation Cabinet biologist during the late '70s. He then coordinated the Kentucky Department of Fish and Wildlife Resources' Nongame Wildlife Program for nearly 10 years before becoming the Daniel Boone National Forest endangered species biologist. He is currently on a two-year leave of absence from the U.S. Forest Service completing a book on amphibians and reptiles of Kentucky.

MacGregor's areas of expertise include fungi, orchids, land snails and mammals. He is also nationally recognized as an authority on amphibians, reptiles and bats. He has written and contributed to dozens of papers and oral presentations on Kentucky's fauna and flora. Particularly commendable is his willingness to share his extensive knowledge through slide presentations and illustrated talks. Additionally, he generously shares his outstanding nature photography (some of which is displayed on the cover of this issue of *Land, Air & Water*) with various organizations and publications.

MacGregor arguably may be responsible for a greater contribution to the overall knowledge of Kentucky's fauna and flora than any other individual during the past two decades. He co-authored the description of the Cumberland Plateau Salamander (*Plethodon kentucki*), a newly described species. He serves on the Indiana Bat Recovery Team, helping steer recovery efforts for this federally endangered species. He also has contributed dozens of new locational records to the commission for use in protection efforts. Based on these accomplishments and many more, MacGregor was unanimously chosen to receive the 2001 KSNPC award. It was presented during the quarterly commission meeting last month.

For more information about the Biological Diversity Award or the Kentucky State Nature Preserves Commission, visit www.kynaturepreserves.org or call (502) 573-2886.



MacGregor doing what he does best. Photo by James D. Kiser

Kentucky Heritage Land Conservation Fund wins KAGC award

By Cindy Schafer
Office of the Secretary



And the winner is . . .

The Kentucky Association of Government Communicators (KAGC) annually holds a ceremony to recognize public agencies for their professional excellence in written and broadcast communications materials and campaigns.

This year, the Kentucky Heritage Land Conservation Fund (KHLCF) received an award for "Doing it on the Cheap." This category is judged on ability to show creativity, communicate in clear and effective methods, and demonstrate intended purpose, while operating on restricted and limited resources.

The KHLCF submitted its marketing campaign for the Nature License Plate, which is used to raise funds to purchase and preserve land in Kentucky. The KHLCF was established to award funding through grants to state agencies, state colleges and universities, and local governments for the protection of significant natural areas and wildlife habitat.

Mary Jean Eddins accepted the award on behalf of the KHLCF at the KAGC awards banquet in August.

See "Two Projects Become Reality" on pages 9-10 of this issue to find out more about the KHLCF program and the major part it plays in the preservation of Kentucky's natural pride and joy.

Congratulations, KHLCF.

DEP encounters management changes

By Department for Environmental Protection staff

The Kentucky Department for Environmental Protection (DEP) recently lost two of its most experienced leaders to retirement. Jack Wilson, who served as the director of the Division of Water (DOW) for more than 14 years, decided to retire



Jeff Pratt

in November with more than 19 years total service to Kentucky state government. Wilson also served as DEP commissioner for four years, from 1976 to 1981.

In addition, John Hornback, director of the Division for Air Quality (DAQ), accepted a position as executive director of the Atlanta-based Southeastern States Air Resource Managers and Metro 4. This organization assists state and local agencies in preparing air quality plans. Hornback retired with more than 25 years of state service, the last nine as chief of air quality.

"These two managers took with them a world of institutional knowledge," said DEP Commissioner Bob Logan. "The department wishes them the best of luck in future endeavors. They will be greatly missed."

Veteran regulators Jeff Pratt and John Lyons assumed responsibility as the new agency directors. Pratt stepped up from his position as assistant director of the Division of Waste Management to accept the DOW position, and Lyons moved into the air quality director's job from his former position as an internal policy analyst.

"Jeff has bachelor's degrees in biology and civil engineering and a master's degree in civil engineering," said Logan. "He also has more than 21 years of experience in this agency. His technical knowledge and leadership ability make him the logical choice as the new water director."

"John has nearly 13 years of experience with the DEP, much of which was spent as a supervisor and manager in both the DOW and DAQ enforcement branches," Logan added. "His degrees in both environmental science and industrial technology will serve him well in his new position."

The cabinet congratulates Pratt and Lyons on achieving their new management roles and wishes them the best of luck in 2002.



John Lyons

Zourarakis named interim director

By Martin Bess
Division of Conservation

Dr. Demetrio Zourarakis is currently serving as interim South Central Region Director of the Soil and Water Conservation Society (SWCS). The SWCS is a nonprofit, scientific and educational organization with nearly 10,000 members in more than 80 chapters. The SWCS fosters the science and art of soil, water and related natural resource management to achieve sustainability, as well as recognizing the interdependence of people and the environment. The southcentral region includes Alabama, Arkansas, Kentucky, Louisiana, Mississippi and Tennessee.

Zourarakis is a geographic information systems specialist with the Kentucky Division of Conservation, where he provides geospatial data analysis support. He earned a doctorate in soil science and plant physiology from the University of Kentucky, a master's degree of science in soil fertility from Iowa State University and a bachelor's degree of science in agronomy from the University of Buenos Aires, Argentina.

He has been a member of SWCS since 1986 and the Bluegrass Chapter since 1988, which he served as president during 2000-2001. He is active in the chapter by providing professional development opportunities, especially regarding the use of information technology in natural resource management.

In 1996, 1997 and 1998 he accepted invitations by two Argentine universities to teach a course entitled "Environmental Impact of Agricultural and Crop Residue Management Practices." He is adjunct assistant professor at the University of Louisville's Department of Geography and Geosciences.

Zourarakis was nominated to fill the final year of a three-year term for 2002-2003. The election will take place in March 2002 to fill the vacancy.

Cabinet donates computers to area schools

By Ronnie Thompson
Department for Surface Mining
Reclamation and Enforcement

The Natural Resources and Environmental Protection Cabinet recently found a way to dispose of outdated computer equipment while helping local schools in need of hardware for their classrooms.

Personal computers and laptops are now a way of life for Department for Surface Mining Reclamation and Enforcement (DSMRE) staff since the EMPOWER Kentucky initiative took affect. EMPOWER Kentucky is Gov. Paul Patton's initiative to make state government more efficient and effective by streamlining how services are delivered to Kentucky taxpayers. DSMRE made significant progress in implementing its electronic permitting process, which allows coal companies, consulting engineers and DSMRE field staff the

*Commissioner Carl Campbell
presents surplus computer
equipment to Jimmy Potter,
Virgie Middle School.*
DSMRE photo

ability to accept, process and issue permits electronically. These new innovative functions require periodic upgrades in hardware, which create a surplus of usable equipment.

When equipment cannot be used by other cabinet departments, it is sent to state Surplus Property or donated to other state agencies, county or city governments, or school systems.

Recently, Virgie Middle School substitute teacher Jimmy Potter, requested the state's help because his Pike County students were unable to complete their homework assignments due to a lack of classroom computers. Last November the DSMRE, along with the cabinet's Department for Environmental Protection, donated computers, monitors, printers, keyboards, memory boards and power cords.



Desktop computers, monitors and printers were also donated to the Julius Marks Elementary School in Lexington.

"I know both schools appreciate these computers," said DSMRE Commissioner Carl Campbell. "Our cabinet is proud to be able to provide the much-needed equipment to help these students."

For teachers who want to obtain surplus computers, equipment is available on a first-come basis. Unfortunately, it is not possible to fill every request due to availability. Software is not included. For more information contact Shari Aldridge at (502) 564-2282 ext. 149 or e-mail shari.aldridge@mail.state.ky.us



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